

## Walk on the Wild Side: Temporarily Unstable Paths and Multiplicative Sunspots<sup>†</sup>

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*We propose a generalization of the rational expectations framework to allow for temporarily unstable paths. Our approach introduces multiplicative sunspot shocks and it yields drifting parameters and stochastic volatility. Then, we provide an econometric strategy to estimate this generalized model on the data. The methodology allows the data to choose between different possible alternatives: determinacy, indeterminacy, and temporary instability. We apply our methodology to US inflation dynamics in the 1970s through the lens of a simple New Keynesian model. When temporarily unstable paths are allowed, the data unambiguously select them to explain the stagflation period in the 1970s. (JEL D84, E12, E31, E32, E52)*

The vast majority of modern dynamic macroeconomics has relied on models of rational expectations (RE) with a unique stable equilibrium, following the methodology in Blanchard and Kahn (1980). This somewhat limits the ability of the models to analyze unstable behavior in the data, which is an important issue in macroeconomics, especially after the Great Financial Crisis. One option is to make RE models more flexible to allow temporarily explosive paths. This work provides a novel theoretical framework that considers a broader class of solutions to allow for temporary instability. Moreover, it provides an empirical strategy to take this theoretical framework to the data. Our contribution is therefore both theoretical and empirical.

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